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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,783	11/04/2003	Wilhelmus H.J. Nellen	0142-0430P	5915
2292	7590	08/11/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EVANISKO, LESLIE J	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,783

Applicant(s)

WILHELMUS H.J. NELLEN

Examiner

Leslie J. Evanisko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-04-2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The abstract of the disclosure is objected to because of the following informalities: the use of the language "The present invention relates to".

Correction is required. See MPEP § 608.01(b).

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should **avoid using phrases which can be implied**, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The use of the term "Iglidur X" on pages 8 and 14 of the specification is noted. If this term is a trademark, it should be in all capital letters wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

5. Claims 1-10 are objected to because of the following informalities:

With respect to claim 1, the claim has several issues with the language being somewhat confusing. For example, applicant recites a plurality of plain bearings in line 4 and then recites a first plain bearing and a second plain bearing in lines 6-7. Similarly, applicant recites a set of parallel guide rods in line 3 and then recites a first guide rod and a second guide rod in lines 6-7. It is clear from the disclosure that the first and second plain bearings recited are part of the plurality of bearings and that the first and second guide rods are the set previously defined. Therefore, in order to better clarify the claimed relationship, it is suggested that claim 1 be amended to use language such as the following:

--An apparatus for guiding a printhead fixed to a carriage, which comprises:

a set of substantially parallel first and second guide rods;

at least first and second plain bearings operatively connected with said carriage and in sliding contact with said set of substantially parallel first and second guide rods;

said first plain bearing in contact with said first guide rod and said second plain bearing in contact with said second guide rod, the second plain bearing being movably fixed to the carriage by a resilient element, wherein the resilient element allows substantially no movement of the second plain bearing with respect to the carriage in a direction substantially parallel to the first and second guide rods.--

With respect to claim 2, it is suggested that the term "a" in line 3 be deleted and the term "rod" in line 3 be changed to --rods-- since the first and second guide rods were previously recited.

With respect to claim 4, line 3, it is suggested that the phrase --first and second-- be inserted before "guide rods" to use consistent terminology.

With respect to claim 7, line 2, it is suggested that the term "first" be inserted after "said" to clarify which plain bearing is being referred to and furthermore, it is suggested that the term "first" be inserted after "the" in line 3 to clarify which guide rod is being referred to.

With respect to claim 10, the term "the plain bearing" in line 3 has no proper antecedent basis since no plain bearing was previously recited. Additionally, the term "the cavity wall" in lines 5-6 and 9-10 has no proper antecedent basis since no cavity wall was previously recited.

Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, the scope of the claim is somewhat unclear since the preamble of the claim is not consistent with the body of the claim. For example, the preamble of the claim is drawn to an apparatus for guiding a printhead fixed to a carriage. However, the body of the claim goes on to provide a structural connection to the carriage, thereby making it unclear as to whether the carriage is intended to be part of the claimed combination or not. It appears from the context of the claim language, that the carriage is a necessary element in the claimed combination. Therefore, in an effort to advance prosecution of the application, the Examiner has assumed that the carriage is part of the positively recited structural elements of the apparatus. However, it is suggested that claim 1 be amended to positively recite the carriage.

With respect to claim 8, it is noted that applicant recites the surfaces are made from Iglidur X. It appears to the Examiner that this term is a trademark.

Please note where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a material and, accordingly, the identification/description is indefinite.

Appropriate correction and/or clarification is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jadrich (GB 2306685 A). Jadrich teach an apparatus for guiding a printhead fixed to a carriage comprising a set of substantially parallel guide rods 14, 16

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and first and second plain bearings 74, 232, the second plain bearing being movably fixed to the carriage by a resilient element 230, the resilient element allowing substantially no movement of the second plain bearing with respect to the carriage in a direction substantially parallel to the guide rods. See Figures 9-15 in particular.

With respect to claims 2-4, note the resilient element is a leaf spring situated parallel to the guide rods and substantially perpendicular to a plate formed by the rods.

With respect to claim 5-6, note the guide rods 14, 16 are round and the bearing surfaces are concave and “substantially equal” to the diameter of the guide rod, as shown, for example, in Figure 11.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jadrich (GB '685) in view of Ikeda et al. (EP 1 201 448 A2). Jadrich teaches an apparatus as recited, with the exception of the first plain bearing having two bearing surfaces and both bearing surfaces being in contact with the guide rod

at the top thereof. Ikeda et al. teach a bearing for a printer carriage having two guide surfaces which contact a guide rod along a top thereof. See, for example, Figure 4 of Ikeda et al. In view of this teaching, it would have been obvious to one of ordinary skill in the art to provide the bearing to have two bearing surfaces as taught by Ikeda et al. in the device of Jadrach to provide a carriage that better suppresses noise and vibration during printing.

12. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jadrach (GB '685). Jadrach teach an apparatus as recited with the exception of the bearing surface being made of Iglidur X. However, note Jadrach teach the bearings are made out of thermoplastic materials and Iglidur is understood to be a trademark/tradename for thermoplastic material. Therefore, it would be obvious to one of ordinary skill in the art to provide the bearings of Jadrach be made of any desired thermoplastic material as it would simply require the obvious selection of one known thermoplastic bearing material for another to provide improved bearing performance characteristics.

With respect to claim 9, although Jadrach does not specifically teach the carriage is for use in an inkjet printer, the use of a sliding carriage arrangement in inkjet printers is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art to use the carriage arrangement as taught by Jadrach in an inkjet printer to provide smooth and accurate carriage motion.

Allowable Subject Matter

13. Claim 10 is objected to for the reasons set forth above, but would be allowable if rewritten to overcome the above objections to the satisfaction of the Examiner.

14. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or fairly suggest a printhead carriage plain bearing having all of the structure as recited, in combination with and particularly including, a bearing ring having a plurality of segments in which two segments have bearing surfaces for providing sliding contact with the rod, the two segments are supported by the housing cavity wall, and an adjacent segment is not supported by the cavity wall.


Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Luo (US 4,054,330) teach a carriage for a printer having obvious similarities to the claimed subject matter.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Leslie J. Evanisko** whose telephone number is **(571) 272-2161**. The examiner can normally be reached on M-Th 7:30 am-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leslie J. Evanisko
Primary Examiner
Art Unit 2854

lje
August 9, 2004